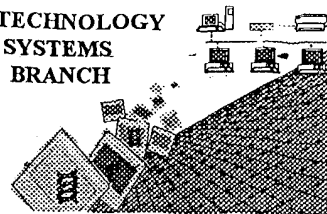


RAW SEQUENCE LISTING **ERROR REPORT**

BIOTECHNOLOGY
SYSTEMS
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/675,971
Source: oife
Date Processed by STIC: 10-10-03

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 4.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/efc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to (EFFECTIVE 12/01/2003):
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/2003

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER:

10/675, 971

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleics
 Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor **after** creating it. Please adjust your right margin to .3; this will prevent "wrapping."

- 2 Invalid Line Length The rules require that a line **not exceed** 72 characters in length. This includes white spaces.

- 3 Misaligned Amino
 Numbering The numbering under each 5th amino acid is misaligned. Do **not** use tab codes between numbers; use **space characters**, instead.

- 4 Non-ASCII The submitted file was **not** saved in ASCII(DOS) text, as **required** by the Sequence Rules. **Please ensure your subsequent submission is saved in ASCII text.**

- 5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. **Per Sequence Rules, each n or Xaa can only represent a single residue.** Please present the **maximum** number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

- 6 PatentIn 2.0
 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. **This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.**

- 7 Skipped Sequences
 (OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for **each** skipped sequence:
 (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 This sequence is intentionally skipped

 Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to **include** the skipped sequences.

- 8 Skipped Sequences
 (NEW RULES) Sequence(s) missing. If **intentional**, please insert the following lines for **each** skipped sequence.
 <210> sequence id number
 <400> sequence id number
 000

- 9 Use of n's or Xaa's
 (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
 Per 1.823 of Sequence Rules, use of <220>-<223> is **MANDATORY** if n's or Xaa's are present.
 In <220> to <223> section, please explain location of **n** or **Xaa**, and which residue **n** or **Xaa** represents.

- 10 X Invalid <213>
 Response Per 1.823 of Sequence Rules, the only **valid** <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is **required** when <213> response is Unknown or is Artificial Sequence

- 11 X Use of <220> Sequence(s) 1-15 missing the <220> "Feature" and associated numeric identifiers and responses.
 Use of <220> to <223> is **MANDATORY** if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
 (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)

- 12 PatentIn 2.0
 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

- 13 Misuse of n/Xaa "n" can **only** represent a single nucleotide; "Xaa" can **only** represent a single amino acid



IFWO

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/675,971

DATE: 10/10/2003

TIME: 10:45:55

Input Set : A:\07680.0017-00000.ST25.txt

Output Set: N:\CRF4\10102003\J675971.raw

3 <110> APPLICANT: Dibenedetto, Peter
 5 <120> TITLE OF INVENTION: ASSAYS FOR EVALUATING ANTI-OSTEOARTHRITIC ACTIVITY
 7 <130> FILE REFERENCE: 07680-0017-00000
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/675,971
 10 <141> CURRENT FILING DATE: 2003-10-02
 12 <160> NUMBER OF SEQ ID NOS: 15
 14 <170> SOFTWARE: PatentIn version 3.1
 16 <210> SEQ ID NO: 1
 17 <211> LENGTH: 20
 18 <212> TYPE: DNA
 C--> 19 <213> ORGANISM: Artificial/Primer
 W--> 21 <220> FEATURE:
 W--> 21 <223> OTHER INFORMATION:
 W--> 21 <400> 1
 22 actggtggtg gcagatgaca
 25 <210> SEQ ID NO: 2
 26 <211> LENGTH: 23
 27 <212> TYPE: DNA
 C--> 28 <213> ORGANISM: Artificial/Primer
 W--> 30 <220> FEATURE:
 W--> 30 <223> OTHER INFORMATION:
 W--> 30 <400> 2
 31 tcactgttag caggtagcgc ttt
 34 <210> SEQ ID NO: 3
 35 <211> LENGTH: 19
 36 <212> TYPE: DNA
 C--> 37 <213> ORGANISM: Artificial/Probe
 W--> 39 <220> FEATURE:
 W--> 39 <223> OTHER INFORMATION:
 W--> 39 <400> 3
 40 tggcgcgatt ccacggtgc
 43 <210> SEQ ID NO: 4
 44 <211> LENGTH: 19
 45 <212> TYPE: DNA
 C--> 46 <213> ORGANISM: Artificial/Primer
 W--> 48 <220> FEATURE:
 W--> 48 <223> OTHER INFORMATION:
 W--> 48 <400> 4
 49 tggctcacga aatcggaca
 52 <210> SEQ ID NO: 5
 53 <211> LENGTH: 23
 54 <212> TYPE: DNA
 C--> 55 <213> ORGANISM: Artificial/Primer

Does Not Comply
 Corrected Diskette Needed

see item 10
 on error summary
 sheet.

20

see item 11 on error
 summary sheet

23

19

19

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/675,971

DATE: 10/10/2003

TIME: 10:45:55

Input Set : A:\07680.0017-00000.ST25.txt

Output Set: N:\CRF4\10102003\J675971.raw

W--> 57 <220> FEATURE:
 W--> 57 <223> OTHER INFORMATION:
 W--> 57 <400> 5
 58 ggaaccaaag gtctcttcac aga 23
 61 <210> SEQ ID NO: 6
 62 <211> LENGTH: 25
 63 <212> TYPE: DNA
 C--> 64 <213> ORGANISM: Artificial/Probe
 W--> 66 <220> FEATURE:
 W--> 66 <223> OTHER INFORMATION:
 W--> 66 <400> 6
 67 cttggcctct cccatgacga ttcca 25
 70 <210> SEQ ID NO: 7
 71 <211> LENGTH: 21
 72 <212> TYPE: DNA
 C--> 73 <213> ORGANISM: Artificial/Primer
 W--> 75 <220> FEATURE:
 W--> 75 <223> OTHER INFORMATION:
 W--> 75 <400> 7
 76 gggagatcat cgggacaact c 21
 79 <210> SEQ ID NO: 8
 80 <211> LENGTH: 19
 81 <212> TYPE: DNA
 C--> 82 <213> ORGANISM: Artificial/Primer
 W--> 84 <220> FEATURE:
 W--> 84 <223> OTHER INFORMATION:
 W--> 84 <400> 8
 85 gggcctgggtt gaaaagcat 19
 88 <210> SEQ ID NO: 9
 89 <211> LENGTH: 29
 90 <212> TYPE: DNA
 C--> 91 <213> ORGANISM: Artificial/Probe
 W--> 93 <220> FEATURE:
 W--> 93 <223> OTHER INFORMATION:
 W--> 93 <400> 9
 94 ccttttgatg gacctggagg aaatcttgc 29
 97 <210> SEQ ID NO: 10
 98 <211> LENGTH: 20
 99 <212> TYPE: DNA
 C--> 100 <213> ORGANISM: Artificial/Primer
 W--> 102 <220> FEATURE:
 W--> 102 <223> OTHER INFORMATION:
 W--> 102 <400> 10
 103 tggcattgct gacatcatga 20
 106 <210> SEQ ID NO: 11
 107 <211> LENGTH: 17
 108 <212> TYPE: DNA
 C--> 109 <213> ORGANISM: Artificial/Primer
 W--> 111 <220> FEATURE:

Same
errors

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/675,971

DATE: 10/10/2003

TIME: 10:45:55

Input Set : A:\07680.0017-00000.ST25.txt

Output Set: N:\CRF4\10102003\J675971.raw

W--> 111 <223> OTHER INFORMATION:
W--> 111 <400> 11
112 gccagagggc ccatcaa 17
115 <210> SEQ ID NO: 12
116 <211> LENGTH: 30
117 <212> TYPE: DNA
C--> 118 <213> ORGANISM: Artificial/Probe
W--> 120 <220> FEATURE:
W--> 120 <223> OTHER INFORMATION:
W--> 120 <400> 12
121 ctcttttggga attaaggagc atggcgactt 30
124 <210> SEQ ID NO: 13
125 <211> LENGTH: 21
126 <212> TYPE: DNA
C--> 127 <213> ORGANISM: Artificial/Primer
W--> 129 <220> FEATURE:
W--> 129 <223> OTHER INFORMATION:
W--> 129 <400> 13
130 ttctcgttgc tgctcatgaa a 21
133 <210> SEQ ID NO: 14
134 <211> LENGTH: 26
135 <212> TYPE: DNA
C--> 136 <213> ORGANISM: Artificial/Primer
W--> 138 <220> FEATURE:
W--> 138 <223> OTHER INFORMATION:
W--> 138 <400> 14
139 tagagtgggt acatcaaagc ttcagt 26
142 <210> SEQ ID NO: 15
143 <211> LENGTH: 25
144 <212> TYPE: DNA
C--> 145 <213> ORGANISM: Artificial/Probe
W--> 147 <220> FEATURE:
W--> 147 <223> OTHER INFORMATION:
W--> 147 <400> 15
148 tggccactcc ctgggtctct ttcac 25

Some
errors

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/675,971

DATE: 10/10/2003
TIME: 10:45:56

Input Set : A:\07680.0017-00000.ST25.txt
Output Set: N:\CRF4\10102003\J675971.raw

Use of <220> Feature (NEW RULES):

Sequence(s) are missing the <220> Feature and associated headings.
Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence" or "Unknown". Please explain source of genetic material in <220> to <223> section (See "Federal Register," 6/01/98, Vol. 63, No. 104, pp.29631-32) (Sec.1.823 of new Rules)

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/675,971

DATE: 10/10/2003

TIME: 10:45:56

Input Set : A:\07680.0017-00000.ST25.txt

Output Set: N:\CRF4\10102003\J675971.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application Number
L:19 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:1
L:21 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:1, <213>
ORGANISM:Artificial Sequence
L:21 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:1, <213>
ORGANISM:Artificial Sequence
L:21 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:1,Line#:21
L:28 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:2
L:30 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:2, <213>
ORGANISM:Artificial Sequence
L:30 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:2, <213>
ORGANISM:Artificial Sequence
L:30 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:2,Line#:30
L:37 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:3
L:39 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:3, <213>
ORGANISM:Artificial Sequence
L:39 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:3, <213>
ORGANISM:Artificial Sequence
L:39 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:3,Line#:39
L:46 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:4
L:48 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:4, <213>
ORGANISM:Artificial Sequence
L:48 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:4, <213>
ORGANISM:Artificial Sequence
L:48 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:4,Line#:48
L:55 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:5
L:57 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:5, <213>
ORGANISM:Artificial Sequence
L:57 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:5, <213>
ORGANISM:Artificial Sequence
L:57 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:5,Line#:57
L:64 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:6
L:66 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:6, <213>
ORGANISM:Artificial Sequence
L:66 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:6, <213>
ORGANISM:Artificial Sequence
L:66 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:6,Line#:66
L:73 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:7
L:75 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:7, <213>
ORGANISM:Artificial Sequence
L:75 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:7, <213>
ORGANISM:Artificial Sequence
L:75 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:7,Line#:75
L:82 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:8
L:84 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:8, <213>
ORGANISM:Artificial Sequence
L:84 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:8, <213>
ORGANISM:Artificial Sequence
L:84 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:8,Line#:84
L:91 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:9
L:93 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:9, <213>
ORGANISM:Artificial Sequence
L:93 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:9, <213>

ORGANISM:Artificial Sequence

L:93 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:9,Line#:93

L:100 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:10

L:102 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:10, <213>

ORGANISM:Artificial Sequence

L:102 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:10, <213>

ORGANISM:Artificial Sequence

L:102 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:10,Line#:102

L:109 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:11

L:111 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:11, <213>

ORGANISM:Artificial Sequence

L:111 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:11, <213>

ORGANISM:Artificial Sequence

L:111 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:11,Line#:111

L:118 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:12

L:120 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:12, <213>

ORGANISM:Artificial Sequence

L:120 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:12, <213>

ORGANISM:Artificial Sequence

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/675,971

DATE: 10/10/2003

TIME: 10:45:56

Input Set : A:\07680.0017-00000.ST25.txt

Output Set: N:\CRF4\10102003\J675971.raw

L:127 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:13
L:129 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:13, <213>
ORGANISM:Artificial Sequence
L:129 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:13, <213>
ORGANISM:Artificial Sequence
L:129 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:13,Line#:129
L:136 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:14
L:138 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:14, <213>
ORGANISM:Artificial Sequence
L:138 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:14, <213>
ORGANISM:Artificial Sequence
L:138 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:14,Line#:138
L:145 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:15
L:147 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:15, <213>
ORGANISM:Artificial Sequence
L:147 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:15, <213>
ORGANISM:Artificial Sequence
L:147 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:15,Line#:147